Waste drives cost

When you look at making improvements to your services, one thing that should be on the top of your list is finding ways to provide world-class service at the lowest possible cost. I previously posted an article titled “The Cost of Poor Quality,” which discussed the impact of poor operations on the bottom line. In process improvement, the excess expenditures that are driven by inefficiencies and process failures are referred to as the cost of poor quality (abbreviated as COPQ). Alone, many of these costs – a few pennies here and there, or a couple of minutes of time – would be too small with which to bother. However, when you multiply these few pennies or few minutes by many, many repetitions over a long period, they add up to large expenses and hours of lost productivity.

I want to revisit cost in a slightly different way, by looking at the various types of waste that can be found in a process, and the costs that are associated with them. In service processes, there are a few different cost types, but we are primarily concerned with 1) labor, 2) equipment and material, and 3) overhead. The cost of labor is based on the wage that you are paying a person, and the amount of time they invest in a task or process. Because there is a time element in this calculation, when you have waste that unnecessarily increases the amount of time a person must spend on a task, you will automatically see an increase in labor cost. The cost of equipment and material is derived from the amount paid for the materials and equipment themselves, and any associated storage and maintenance costs. Overhead includes the building, utilities, maintenance expense, etc. that can be allocated to a given process.

Let’s look at some different types of waste and the costs associated with each:

- **Rework or correcting errors made while providing a service.** Having to go back and fix or redo a service means that additional labor will be needed to make the changes. The rework may also require the use of business equipment and additional materials, which further drives up the cost of this waste.

- **Unnecessary processing or unnecessary steps in a process.** Adding unneeded or unwanted features to a service, or adding additional unnecessary steps to a process means that you are increasing the amount of time and resources needed to produce it. These types of waste will result in increased labor, materials, and equipment costs.

- **Producing more than is needed or demanded by customers.** It is hard to produce a surplus of a service, but it is easy to overproduce the physical elements that are part of it. A good example would be printing information packets for customers. If packets are printed and stored until they are needed, then you are incurring overhead costs in the form of the space needed to store them. It is also
entirely possible that the information in the packets could change before they are used, and require that the existing stock be recycled and reprinted. When this happens, you are now doing rework, with all of the associated labor, business equipment and materials costs that go with it.

- **Movement of staff and movement of information and materials.** These activities involve time spent on activities that do not add value to the service being provided. Transporting materials and information around the office involves labor and (potentially) equipment costs. Having staff moving around the office or their workstation is an issue of added time, so it is solely a labor cost. Please note that I am not saying people should not be allowed to get up from their desks and move around. I am simply pointing out that movement of staff which does not add value to a product or service is classified as waste from the customers’ point of view, and thus a cost.

- **Idle inventory and work in process.** Idle inventory and work in process represents services or products that are not complete, and to which value is not being added. As I noted before, you cannot really have ‘service’ just sitting around, but you can have the materials that are used to provide a service in process or held in inventory. In both cases, space is required to house items, which is an overhead cost; and you may incur equipment costs to store the materials as well.

Although not considered a waste, the effort related to finding, fixing, and preventing poor quality in services requires someone to do the work, and may require equipment and materials too. These efforts do not add value to the service; they just help ensure the customer is getting what they need. Because of this, quality checks drive labor, equipment and material costs.

As you look at improving your services or products and work to reduce the expenditures associated with providing them, it helps to know what kinds of costs are generated by the various forms of waste you might encounter. With this knowledge, when you see waste you can quickly identify the extra costs associated with it. This knowledge also works in reverse, so when you see excessive costs in a process, you will be able to backtrack to the waste and eliminate it. As always, I welcome your questions or comments. You can email me at clayton.taylor@asu.edu.

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**About the author:**

Clayton Taylor, MBA, is the Director, Organizational Performance and a Certified Six Sigma Master Black Belt working in the Office of the Executive Vice President, Treasurer and Chief Financial Officer at Arizona State University. He leads the Organizational Performance Office. He and his team currently consult with diverse
Business and Finance and university-wide operational areas to lower costs, improve operational efficiency and provide the highest quality customer experience to internal and external customers. Mr. Taylor can be reached at clayton.taylor@asu.edu